

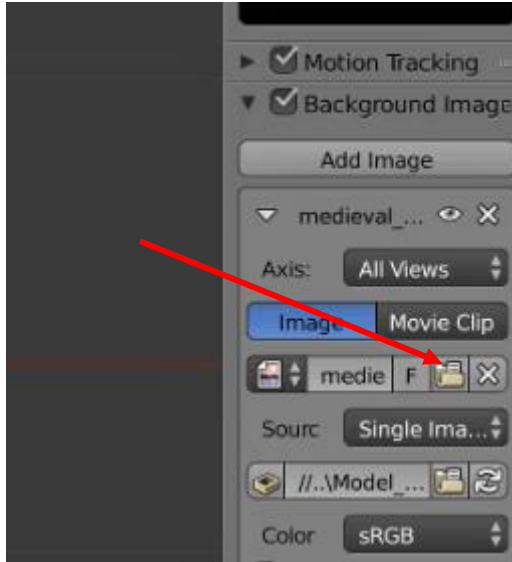
Chapter 4, lesson 50, Making a door

In this lesson we will create the door for our building. We will use techniques that has been introduced in earlier lessons.

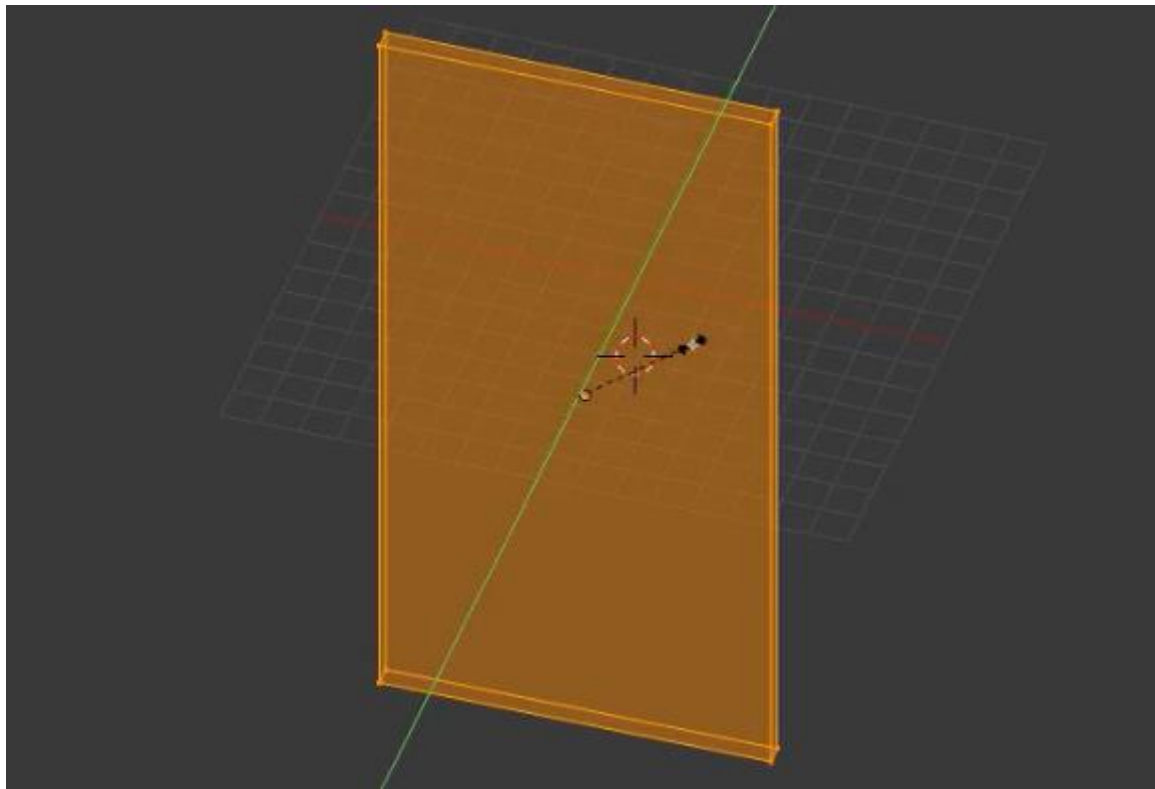
Chapter 4, lesson 50, Making a door

In this chapter we will continue our modelling journey and we have now arrived at the door. Ok enough with bad jokes, lets get going.

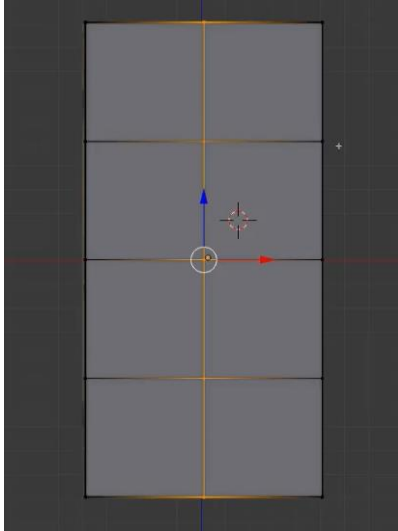
Let us start by going to a new layer. To start we will add a new background image as our reference. Open the N-panel and scroll to the background section where we have our house background. Select the folder icon to replace it and browse for the reference image of the door that is included in the course files for the chapter. The file is called `medieval_door_3.png`.



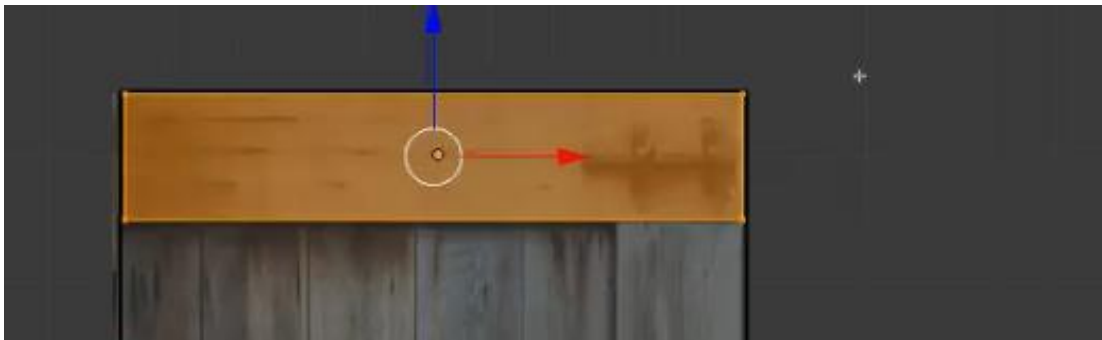
From here we will add a cube that will represent the bulk of our door model. Scale it to fit the background image from front orthographic view. Then we will tumble our view around to scale the door on the Y axis until it has a realistic depth.



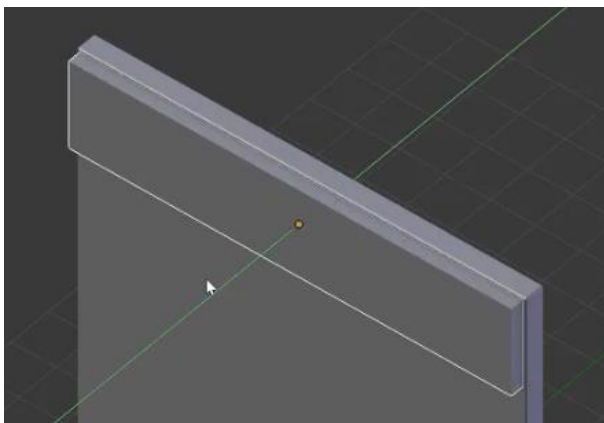
Go back to the N-panel and check so that the scaling is still set to 1 for all our axis. If it's not hit "**ctrl+a**" and chose to reset the scale. Now we will use the bevel tool to bevel the edges of our door. At this point all the edges will be beveled. Select the whole object and use "**ctrl+b**" in edit mode and drag gently with the mouse to add a slight bevel on all the edges. If you find it hard to make the bevel remember that you can hold **shift** while the bevel tool is active to decrease the sensitivity. From here we will add some loop cuts across the door with "**ctrl+r**" and the scroll wheel to increase the count. Let us go for three and one edge loop from top to bottom.



Now we will go to object mode and add another cube that will represent the top plank of the door. "**shift+a**" for the add menu and as another reminder, move the cube into position with "**G**".

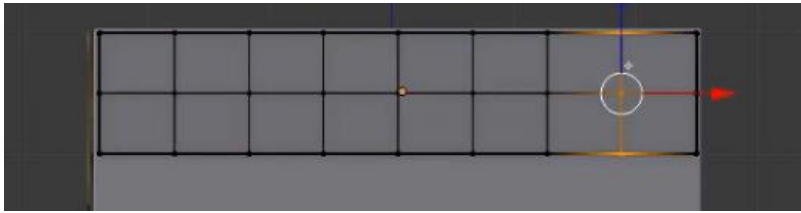


We will need to adjust the depth and position on the Y axis for this new object as well.

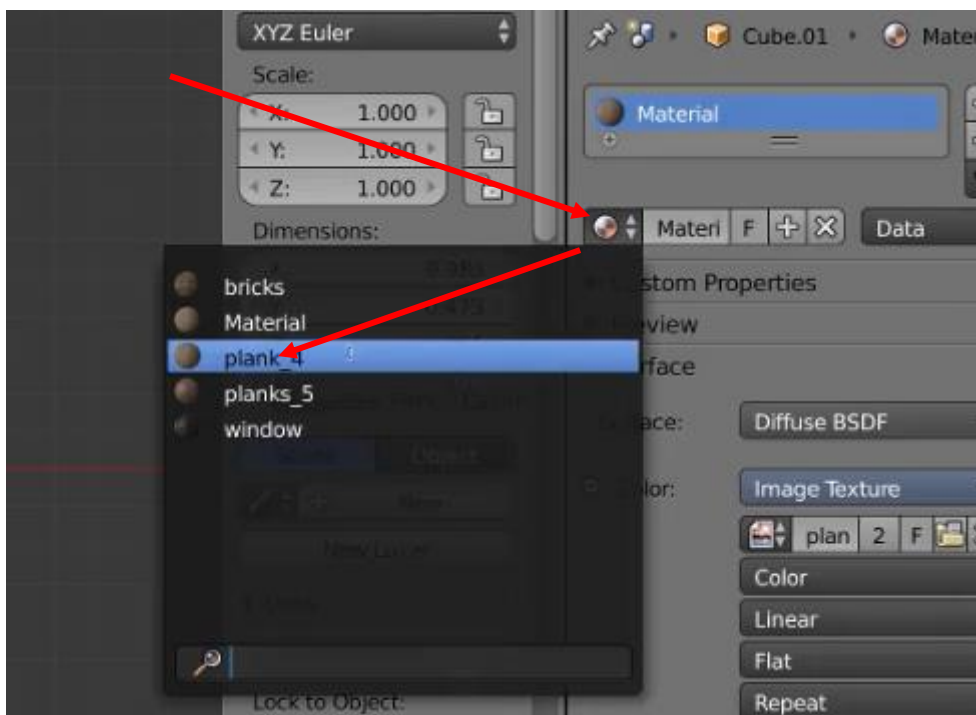


Just like before, add a bevel.

For this plank we will have 7 loop cuts going from top to bottom around it and one going along so that we get nice looking square faces across the surface.

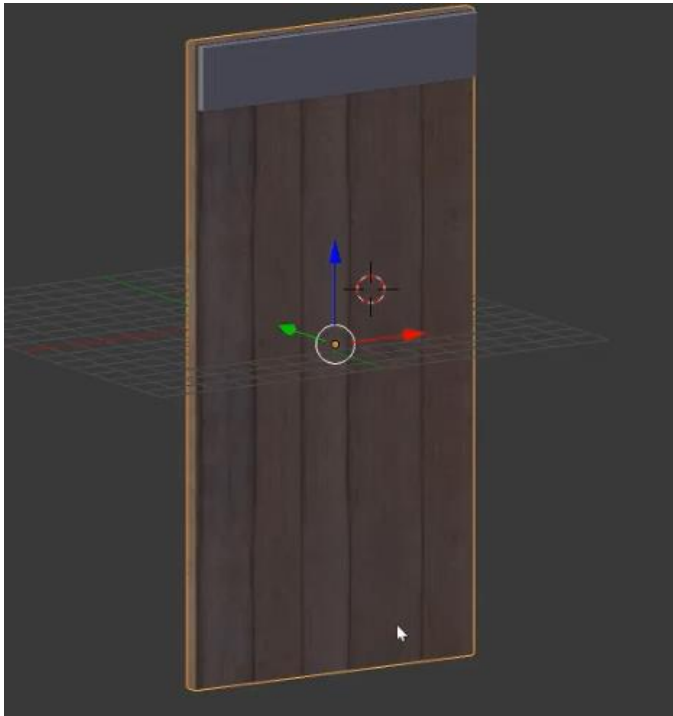


Now we will start to do some texture work before we duplicate our horizontal plank around so let's start with the main object of our door. Go to object mode, select the door and add a new material to it in the properties panel. We will use the same texture as we have for the window frames if you recall. The texture was called planks_4.png. In the video we never renamed the material for the window frames but either way if you did or not, check the name of the material on one of your window frames and add that material to the door.

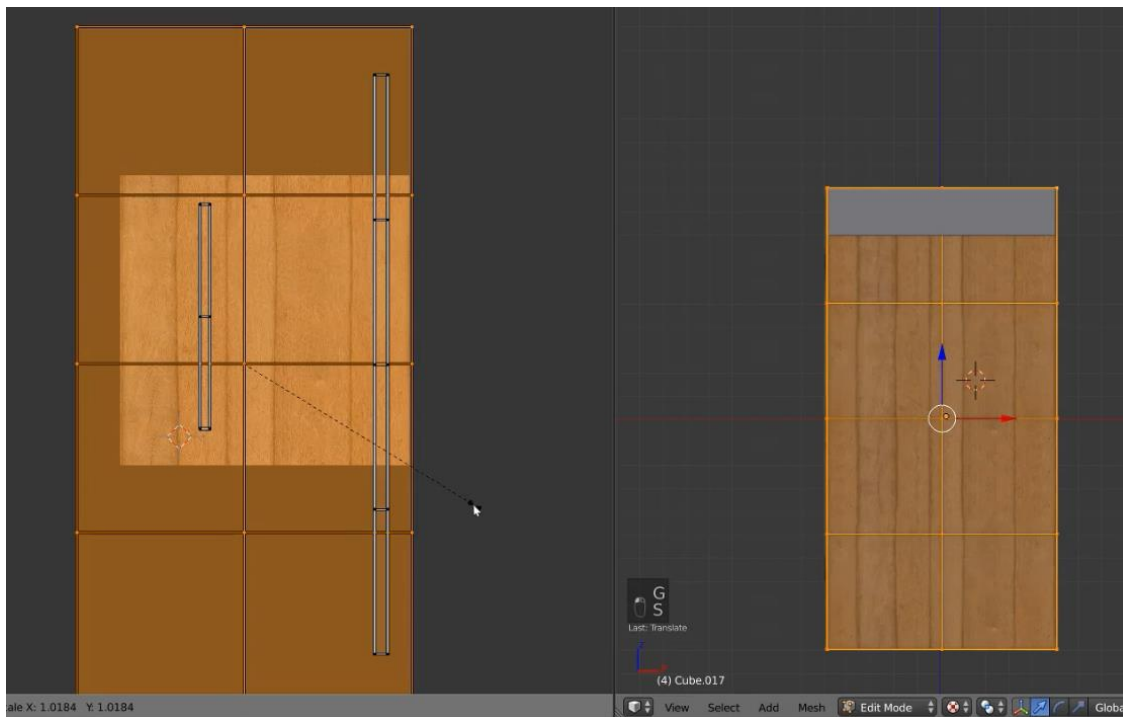


This way we use the same material for both the window frames and the door. This will save us some memory for when it comes time to render.

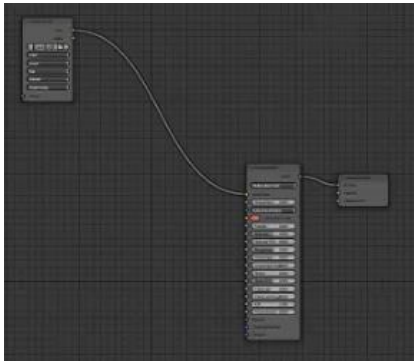
Now we will UV-unwrap the door. Start by going to the UV/Image editor and select the planks_4.png texture. Then to do this you can try to smart UV-project. Remember to press "F6" and uncheck the stretch icon. In the video this didn't really work out. Instead we end up using the project from view method and scale the texture to the appropriate size. With this approach though we need to go around and project from view with the sides of the door as well as the top and bottom making the unwrapping take us three steps instead of one. By now you know how to do the UV-projection so when you are done make sure to check that the scaling of all this sides align with each other to avoid obvious seams. Use the texture or material shaded view to see how it looks.



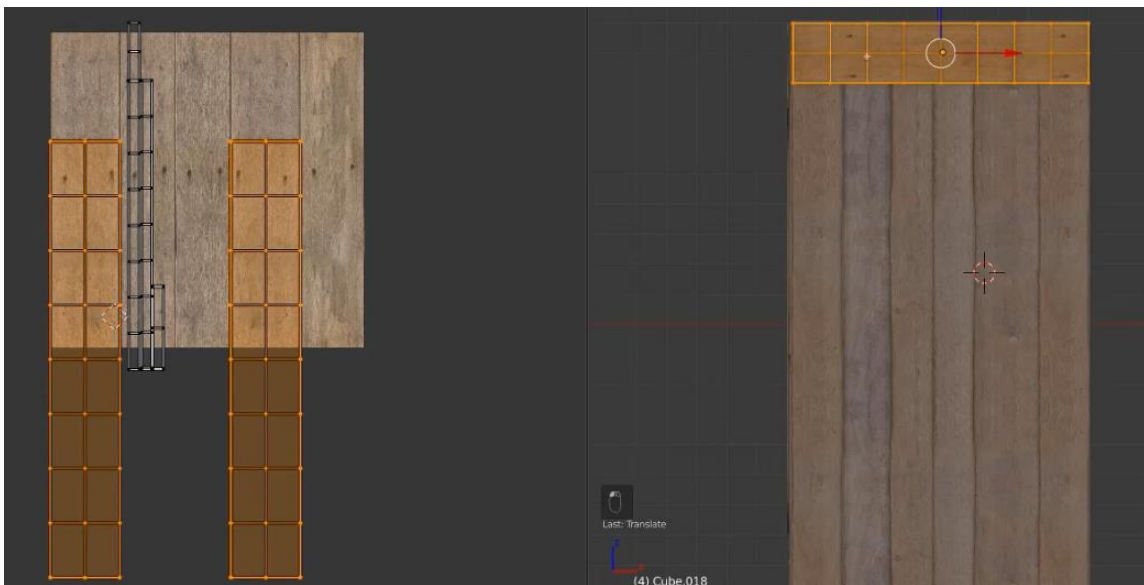
Scale the UV-map to your liking. In the video we scale so that the door encompasses 6 full width planks.



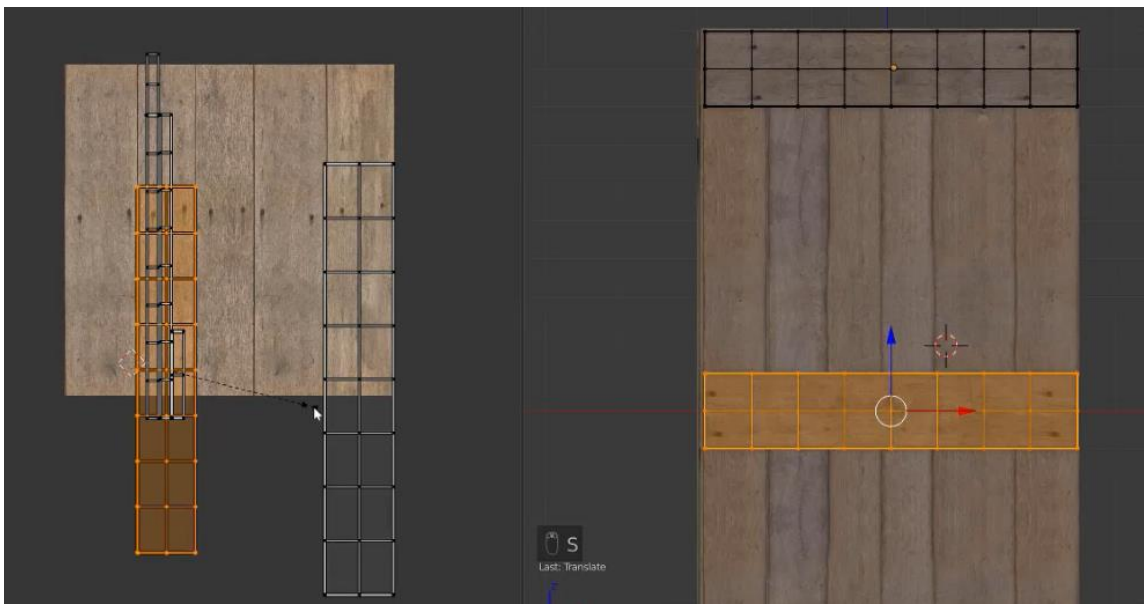
Now we will continue to the horizontal plank that we added at the top of the door. Here we will use the planks_5 texture. We have this applied to the base building material, but this material is a fair bit more complicated at this stage and tailored towards the main building. Instead we will create a new material and call it planks_5_door. Create a principled shader and an image texture inside this new material and browse for the planks_5.png texture.



Now use the smart UV-project with the stretching option turned off for this object and adjust the UV-map. Keep in mind the position of the nails in the texture when you do this. We want two sets of nails at ether end of the plank.



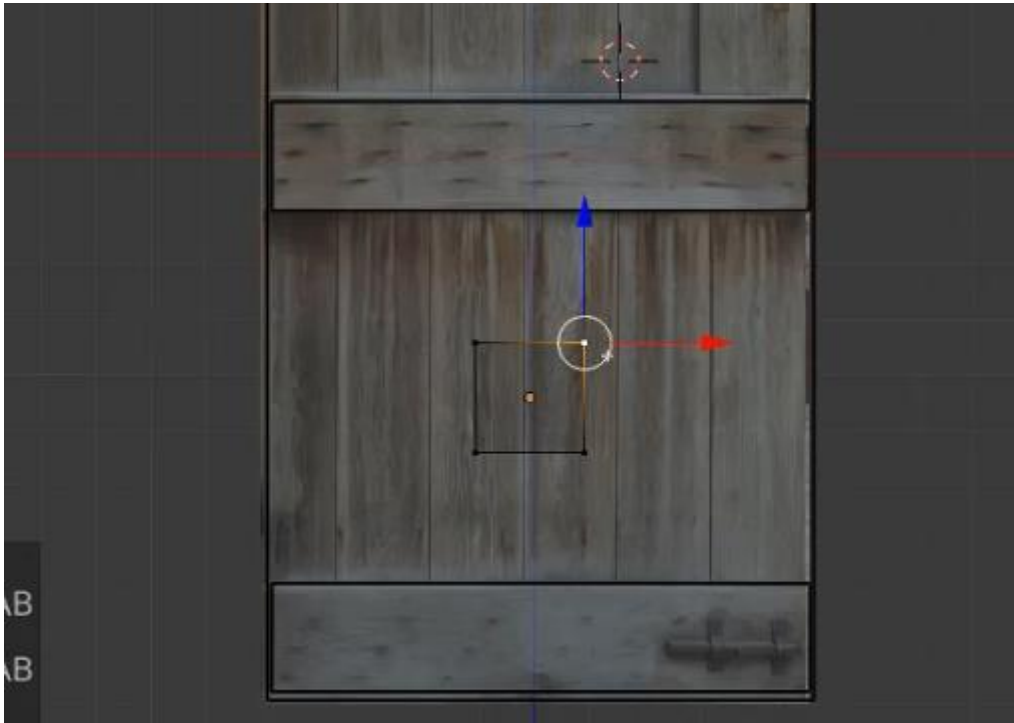
Now we are ready to duplicate the plank to the middle and the base of the door. Use **“shift+d”** to do the duplication. Make sure that you also move the UV-coordinates of the duplication in order to make it look slightly different.



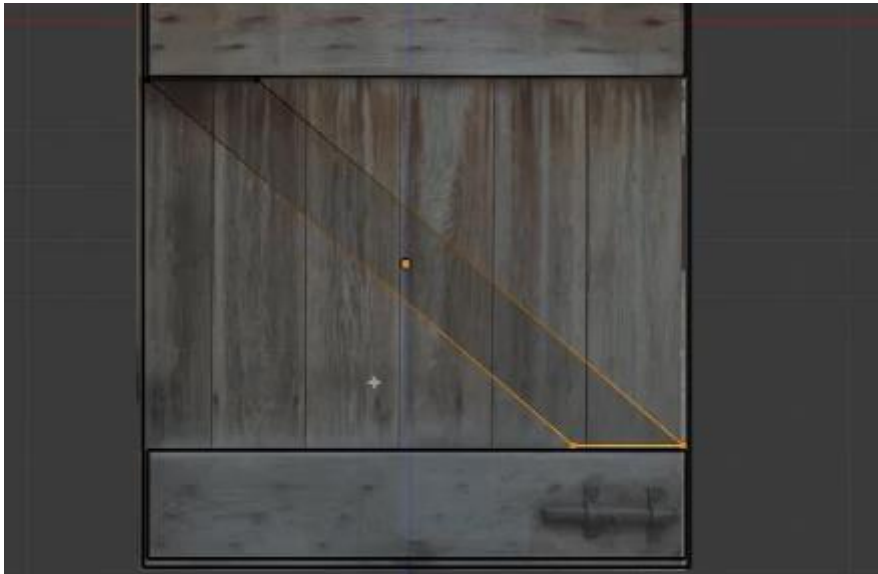
Repeat for the bottom plank and we will have something that looks like this.



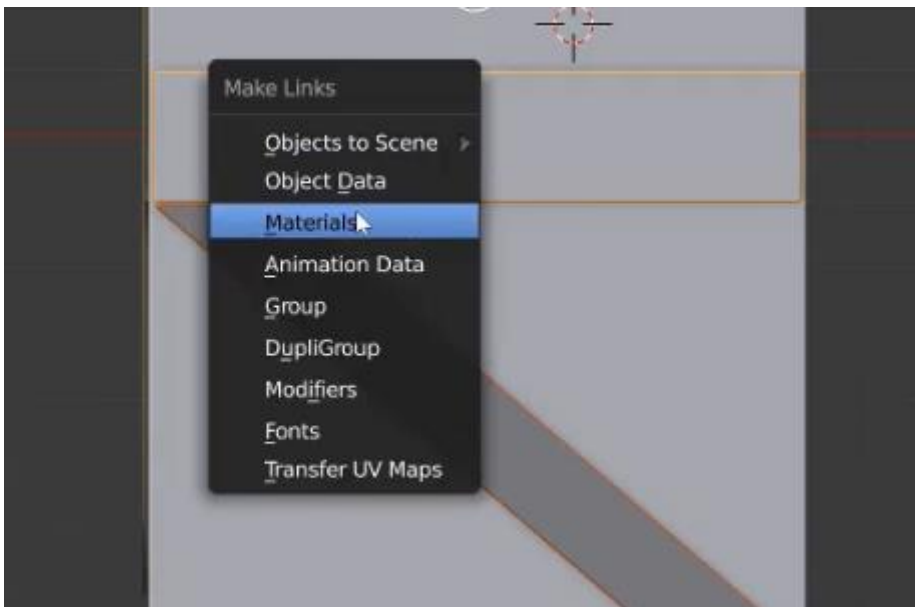
Now we will use our creative freedom as artists and go outside of what the reference show. We will add two diagonal planks, one at the top and one at the bottom part of the door. We add another cube. Move it into place between the middle and lower plank and go into edit mode.



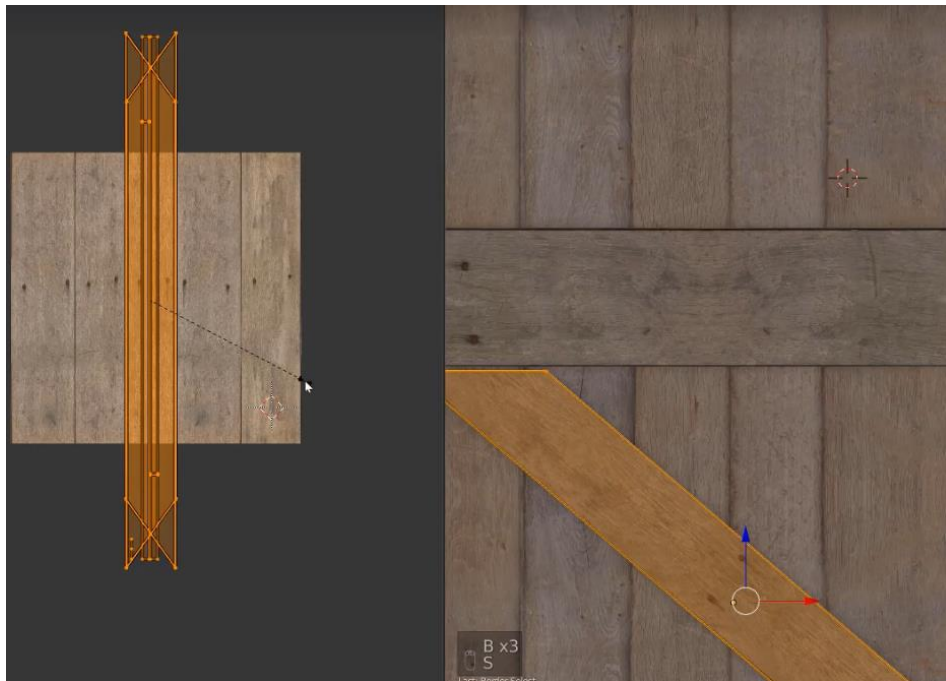
Select the top two vertices and move them to the top left corner of the area between the horizontal planks and do the same for the bottom two vertices in the opposite corner.



Now scale it in the Y direction to have approximately the same width as the other planks. Move it in front of the door and bevel. Now we are at the UV-unwrapping stage. I think that you have discovered the pattern by now. This time use “smart UV project” with the stretch option turned off. To add the material to this plank we will link from the horizontal planks. Go to object mode, select the diagonal plank and shift select one of the horizontal planks. The light yellow outline color indicates the active object. Use “**ctrl+L**” to get to the link menu. Chose material to link the material to the new plank.



Adjust the UV-coordinates so that the nails are in a realistic position and you don’t have a plank with a line running through it. If you need, scale them along the Y as well to stretch them out.



Duplicate the plank to the top part of the door and change the UV-coordinates to use another plank in the texture. The door is now complete. This lesson has included mostly already known concepts techniques and shortcuts and I hope that you have been able to follow along with less guidance. It is part of the learning curve to be able to do more with less. We will continue building on elements related to the door in the next lesson.

